WHAT IS CLAIMED IS:

1. A prosthesis and deployment catheter system for treating an opening from a main body lumen to a branch body lumen, the prosthesis comprising:

a radially expansible support, the support configured to be deployed in at least a portion of the branch body lumen;

a plurality of fronds extending axially from an end of the support and configured to be positioned across the Os and into the main body lumen; and

at least one circumferential link connecting at least a first and a second frond, the circumferential link spaced axially apart from the support;

wherein the prosthesis is mounted on a balloon catheter such that the radially expansible support is carried by a first portion of a balloon that is inflatable to a first diameter and the circumferential link is carried by a second portion of a balloon that is inflatable to a second diameter that is larger than the first diameter.

2. The system of Claim 1, wherein the circumferential link connects each of the plurality of fronds.

3. The system of Claim 1, wherein the plurality of fronds includes at least three fronds.

4. The system of Claim 1, wherein the balloon catheter comprises a single, stepped balloon having a proximal section with a larger inflated diameter than an inflated diameter of a distal section.

5. The system as in Claim 4, wherein at least a portion of the radially expansible support comprises a drug coating, and at least a portion of the fronds and the circumferential link are without a drug coating.

6. The system of Claim 5, wherein the drug coating is configured to produce at least one of a controlled drug release rate, a constant drug release rate, bi-modal drug release rate or a controlled concentration of drug proximate a target vessel wall.

7. The system of Claim 5, wherein the drug is one of an anti-cell prolifertive, anti cell migration, anti-neo plastic, anti inflammatory drug.

8. The system of Claim 5, wherein the drug is configured to reduce an incidence or amount of restensosis.

9. The system of Claim 5, wherein the drug includes a first drug and second a drug.

10. The system of Claim 5, wherein the drug coating includes a first coating and a second coating.

11. The system of Claim 10, wherein the first coating is configured to produce a first drug release rate and the second coating is configured to produce a second drug release rate.

12. A prosthesis and deployment system assembly, comprising:

an elongate, flexible catheter body;

a balloon on the body, the balloon having an inflated profile with a first section having a first diameter, a second section having a second diameter, and a balloon transition in between the first and second sections; and

a prosthesis carried by the balloon;

wherein the prosthesis has a wall having a first wall pattern adjacent the first section of the balloon, and a second wall pattern adjacent the balloon transition.

13. A prosthesis and deployment system assembly as in Claim 12, wherein the prosthesis has a third wall pattern adjacent the second section of the balloon.

14. A prosthesis for placement at an opening from a main body lumen to a branch body lumen, the prosthesis comprising:

a radially expansible support, the support configured to be deployed in at least a portion of the branch body lumen;

at least one frond extending from an end of the support and configured to be positioned across the Os and into the main body lumen; and

at least one circumferential link connected to the frond, the circumferential link spaced axially apart from the support.

15. The prosthesis as in Claim 14, wherein the circumferential link is expandable from a first, reduced diameter to a second, enlarged diameter.

16. The prosthesis as in Claim 14, wherein the at least one frond includes at least three fronds.

17. The prosthesis as in Claim 14, wherein the at least one frond comprises a helical configuration.

18. The prosthesis as in Claim 17, comprising a plurality of helical fronds.

19. The prosthesis as in Claim 14, wherein at least a portion of the frond comprises a lubricous coating.

20. The prosthesis as in Claim 14, wherein the support is on a first end of the frond, and the circumferential link is on a second end of the frond.

21. The prosthesis as in Claim 14, wherein the circumferential link is radiopaque.

22. The prosthesis as in Claim 21, wherein the circumferential link has a greater radiopacity than the frond.

23. The prosthesis as in Claim 14, comprising an endothelial cell ingrowth surface.

24. The prosthesis as in Claim 14, comprising a non thrombogenic surface.

25. A prosthesis for placement at an Os opening from a main body lumen to a branch body lumen; the prosthesis comprising:

a radially expansible support, the support configured to be deployed in at least a portion of the branch body lumen; and

a plurality of fronds extending axially from an end of the support, the fronds configured to be deformably deployed in at least a portion of the main body lumen and to apply less radial force to adjacent tissue than the expanded support applies in the branch body lumen.

26. A kit for stenting a bifurcation in a vessel, comprising:

a branch vessel stent, having a proximal end, a distal end, and at least one frond extending from either the proximal or distal end; and

a main vessel stent, for entrapping the frond against a vessel wall.

27. A kit as in Claim 26, additionally comprising a first balloon catheter for deploying the branch vessel stent.

28. A kit as in Claim 27, additionally comprising a second balloon catheter for deploying the main vessel stent.

29. A dual guidewire catheter for treating vascular bifurcations, comprising:

an elongate, flexible body, having a proximal end and a distal end;

a first guidewire lumen, extending through at least a distal portion of the body;

a second guidewire lumen, extending through at least a portion of the body; and

a stepped diameter balloon on the distal end of the body;

wherein a distal opening on the second guidewire lumen is positioned proximally of the distal end of the balloon.